



THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

Interbasin Transfer Application Bedford's Request for Admission to the MWRA Waterworks Division WRC Decision

I. Background

On October 9, 1990, the Water Resources Commission ruled that communities which apply for membership to the MWRA Waterworks Division are subject to Commission approval under the Interbasin Transfer Act.

On June 20, 1991, the Massachusetts Water Resources Commission received a request from the town of Bedford for approval of an action to increase the present rate of interbasin transfer under the Interbasin Transfer Act (M.G.L. Chapter 21 ss. 8B-8D). The town, located in the Shawsheen and Concord River basins, is applying for admission to the Waterworks Division of the Massachusetts Water Resources Authority, which has sources in the Chicopee and Nashua River basins. Since 1978, when the Town lost 80% of its water supply to ground water contamination, Bedford has been receiving water from the MWRA on an emergency basis through a connection with Lexington. Because the MWRA will not let this emergency situation continue on a long term basis, Bedford has applied for formal membership in the MWRA Waterworks Division. The town is proposing to receive an average of 1.75 mgd on an annual basis from the MWRA.

On February 10, 1992, after receiving additional information from Bedford, the Water Resources Commission accepted the application as complete. Public hearings were held on April 14, 1992 in Bedford and April 15, 1992 in Belchertown at the Quabbin Visitors Center. Public comment was accepted until April 22, 1992.

II. Evaluation of the Proposed Interbasin Transfer

1. This interbasin transfer application was reviewed on its own merits.
2. The WRC decision is made on facts relevant to the Interbasin Transfer Act and its regulations.
3. This decision is based on guidelines and interpretations which have been in effect for more than 5 years.

III. WRC Decision

On May 11, 1992, the Water Resources Commission discussed the merits of this application. Bedford meets all of the six applicable criteria required under the Interbasin Transfer Act (Chapter 658, Acts of 1983). Because the Town has demonstrated a commitment to continue to protect its existing water supply and to continue to implement its conservation program, **the Water Resources Commission approved this application on June 8, 1992.** This decision is conditional upon:

- Bedford continuing to operate and protect the Shawsheen Road wellfield
- Bedford continuing to pursue the restoration of the Hartwell Road wellfield.
- Bedford continuing to implement its conservation program.

IV. Synopsis of Evaluation Criteria

	APPLICATION MEETS
CRITERION #1: MEPA Compliance	Yes
CRITERION #2: Viable Sources	Yes
CRITERION #3: Conservation	Yes
CRITERION #4: Watershed Management	Not Applicable
CRITERION #5: Reasonable Instream Flow	Yes
CRITERION #6: Groundwater	Not Applicable
CRITERION #7: Local Water Resources Management Plan	Yes
CRITERION #8: Other Transfers	Yes

V. Basis for WRC Decision

Although the town of Bedford has made great efforts to secure a safe and reliable water supply within its own basins, and to replace or restore wells lost to contamination, it has not been successful in identifying viable sources of supply in sufficient quantities to meet the needs of its citizens. Potential sources of water supply which have been investigated by the town include:

- Pursuit of a joint water supply with the town of Billerica
- Restoration of Well #1
- Restoration of Well #3 (Mitre Well)
- Continued use of the Shawsheen Road Wellfield
- Restoration of Well #6
- Restoration of the Turnpike Wellfield
- Restoration of the Hartwell Road Wellfield
- Purchase of water from Billerica
- Purchase of water from Lexington
- Development of a second well at the Mitre site
- Development of a well at the Putnam Road site
- Purchase of water from Tewksbury
- Purchase of water from Lowell
- Construction of a raw water intake at the Merrimack River
- Use of the Concord River, employing:
 - Sudbury Reservoir discharge
 - Off-stream storage reservoir
 - Construction of a new water treatment plant

Of the sources investigated by the town, only continued use of the Shawsheen Road Wellfield is considered viable under Criterion #2 of the Interbasin Transfer Act regulations. Restoration of the Hartwell Road Wellfield is being actively pursued by the town; however, until the necessary studies are completed and the lawsuit involving the Potentially Responsible Party (PRP) is concluded, it cannot be considered a viable source for the purposes of the Interbasin Transfer review.

The other potential sources are not considered viable by DEP because of low yield, unreliability of supply, contamination, difficulty in purchasing the land required to protect the Zone I area, difficulty in controlling the land uses in Zone II, cost, impossibility of obtaining necessary permits, or a combination of the above.

In addition, the town has shown a commitment to implement conservation measures to reduce overall demand. These measures include:

- The entire system is surveyed for leaks every two years.
- 100% of the system is metered.
- All public buildings are metered.
- The town has instituted a program to repair and replace 200 meters per year.
- The town has an increasing block rate, with full cost pricing. The rates for water and sewer are updated annually to account for all increased costs.
- The town has an ongoing public information program using local print and television (cable) media. Conservation literature has been distributed to all customers through bill stuffers. The Water Department participates in town events, such as Bedford Days, with displays about conservation.
- There is a bylaw to enforce water emergencies which gives the town the power to levy fines.
- A successful Water Bank was established in 1986. The bank has a surplus, indicating no pent up demand.
- Efficient water fixtures installed in all public buildings.
- Residential gpcd is 65.
- A town bylaw prohibits use of town water in industrial cooling or air conditioning systems.

VI. Reasonable Instream Flow

It is the judgement of the WRC that the addition of the town of Bedford to the MWRA Waterworks Division will not cause the MWRA to exceed its safe yield, fail to meet its legislated releases to the Swift River, or fail to meet the demand of its member communities.

VII. Cumulative Impacts

There is some concern that incremental impacts, whether from the addition of new communities to the MWRA system, or from increased demands in member or contract communities could result in long term cumulative impacts on the Quabbin Reservoir. The WRC shares this concern. However, many factors will work to minimize any cumulative impacts to this resource. The MWRA's commitment to use water conservation as a "first source" option for water supply, the MWRA Enabling Act's strict requirements for admission, the MEPA review requirement, the Interbasin Transfer application requirement, together with expected future water rate increases, the waterworks system entrance fee, and pipeline construction costs, will act as checks to insure that entrance to the MWRA waterworks system is a measure of last resort for a community.

INTERBASIN TRANSFER ACT
313 CMR 4.05: CRITERIA FOR EVALUATING
AN APPLICATION FOR APPROVAL

APPLICATION BY THE TOWN OF BEDFORD
TO JOIN THE MWRA WATERWORKS DIVISION

CRITERION #1 An environmental review pursuant to MGL, c.30, ss 61 and 62H, inclusive has been complied with for the proposed IBT.

The Secretary of Environmental Affairs certified the Final EIR for the project on March 2, 1992.

CRITERION #2 All reasonable efforts have been made to identify and develop all viable sources in the receiving area.

The DEP, in a letter to the town dated 13 December 1991, concluded that the town had made all reasonable efforts to identify and develop all viable water supply sources. The DEP further concluded that the Concord River was not considered to be a viable local source for the town.

CRITERION #3 All practical measures to conserve water have been taken in the receiving area, including but not limited to the following:

<u>CONSERVATION MEASURE</u>	<u>RECOMMENDATIONS</u>	<u>ACCOMPLISHMENTS</u>
Leak Detection	Entire system surveyed every two years.	Ongoing leak detection program to survey the entire system every two years. Last survey performed in 1990. Next survey scheduled for 1992.

CONSERVATION MEASURE

RECOMMENDATIONS

ACCOMPLISHMENTS

Metering

100% of system metered.
Test all meters over 10
years old. Quarterly meter
readings.

100% of system metered.
All public buildings
metered. Program to repair
and replace 200 meters per
year

Rate structure which
reflects and encourages
conservation.

Full cost / No decreasing
block rate.

Increasing block rate.
Full cost pricing. Rate
structure for water and
sewer updated annually to
account for all increased
costs.

Public Information Program

Bill Stuffers.

Ongoing program using local
print and television
(cable) media.
Distribution of
conservation literature to
all customers.
Participation in town
events.

Drought Contingency Plan

DEP-approved plan dated
March 1989. Bylaw to
enforce water emergencies
with the power to levy
fines. Successful Water
Bank established in 1986.

Implement land use controls
for the sources in the
receiving area that meet
DEP regulations 310 CMR
22.20.

Restrictions on salt use in
watershed areas; Water
supply protection zoning.
Purchase of watershed
lands; Sanitary survey of
watershed lands in
conjunction with DEP.

CONSERVATION MEASURE

Plumbing fixtures

RECOMMENDATIONS

Enforce state plumbing code/retrofit public buildings with water saving devices / make retrofit devices available at cost if residential GPCD is over 80.

ACCOMPLISHMENTS

Enforce plumbing code. Efficient water fixtures installed in all public buildings. Residential gpcd is 65; have encouraged residential use of fixtures through newspaper articles and direct distribution. Have contacted industries to encourage conservation. Bylaw prohibits use of town water in industrial cooling or air conditioning systems.

CRITERION #4 Not applicable: pertains to forestry management programs on surface water supply watershed lands.

CRITERION #5 Reasonable instream flow in the river from which the water is transferred is maintained.

The MWRA and the town of Bedford have modelled the effect that meeting 100% of Bedford's demand with water from MWRA sources would have on the safe yield of those sources, and the mandated downstream releases from those sources. The results show that the MWRA can supply 100% of Bedford's needs without exceeding its safe yield or violating the mandated release requirements.

CRITERION #6 Not Applicable: pertains only to proposed interbasin transfers that are ground water withdrawals.

CRITERION #7 Communities have adopted or are actively engaged in developing a local water resources management plan.

Bedford has completed a Municipal Water Resources Management Plan and a Conservation Plan.

CRITERION #8 The Commission shall consider the impacts of all past, authorized or proposed transfers in the donor basin.

The MWRA system is relied on for water supply by the majority of communities within the Boston metropolitan area. Because of this, it is important to assure that withdrawals remain within the safe yield of the system in order to provide a reliable source of water to the region. To this end, the MWRA Enabling Act enacts strict requirements for admission. In addition, each applicant community must complete the MEPA review process and the Interbasin Transfer process, as well be able to meet the expected future water rates, the waterworks system entrance fee, and pipeline construction costs. It is considered that these requirements will act as checks to insure that entrance to the MWRA waterworks system is a measure of last resort for a community.